

Math 1303 - Math in the Liberal Arts

Homework #1 - 2008.01.11

Due Date - 2008.01.18

1. Compute the next three terms in each of the following sequences by using inductive reasoning. Be sure to explain your reasoning.

a) 0, 1, 1, 2, 3, 5, 8, 13, 21 ...

b) 1, 1, 2, 2, 3, 4, 4, 8, 5, 16, 6 ...

c) 1, 2, 4, 6, 10, 14, 22, 26, 34 ...

d) 1, 11, 21, 1211, 111221, 312211, 13112221, 1113213211 ...

e) 2, 3, 5, 6, 7, 8, 10, 11, 12, 13, 14, 15, 17, 18, 19, 20, 21, 22, 23 ...

f) 11, 13, 17, 25, 32, 37, 47, 58, 71, 79, 95, 109, 119 ...

2. Give two examples of estimation that you may have used recently and be sure to work out all the details. You may not use any example or problem from the book!

3. Give both a correct and incorrect example of inductive reasoning which does not involve mathematics.